PLANT AND SOIL

Contents Volume 279 Nos. 1–2 January 2006

Part I

Plant Mineral Nutrition
X Iberian Symposium

Guest editors:
Maria Amélia Martins-Loução & Cristina Cruz

Editorial vii

Analysis of *Lupinus albus* leaf apoplastic proteins in response to boron deficiency
M. Alves, R. Francisco, I. Martins and C.P.P. Ricardo 1–11

Are root hydraulic conductivity responses to salinity controlled by aquaporins in broccoli plants?
C. López-Berenguer, C. García-Viguera and M. Carvajal 13–23

Boron increases synthesis of glutathione in sunflower plants subjected to aluminum stress
J.M. Ruiz, R.M. Rivero and L. Romero 25–30

Effectiveness of ethylenediamine-*N*(*o*-hydroxyphenylacetic)-*N*′(*p*-hydroxyphenylacetic) acid (*o,p*-EDDHA) to supply iron to plants
S. García-Marco, N. Martínez, F. Yunta, L. Hernández-Apaolaza and J.J. Lucena 31–40

Stress Responses of *Zea mays* to Cadmium and Mercury
R. Rellán-Álvarez, C. Ortega-Villasante, A. Álvarez-Fernández F.F. del Campo and L.E. Hernández, 41–50

How do mycorrhizas affect C and N relationships in flooded *Aster tripolium* plants?
D. Neto, L.M. Carvalho, C. Cruz and M.A. Martins-Loução 51–63

Are mycorrhiza always beneficial?
A. Corrêa, R.J. Strasser and M.A. Martins-Loução 65–73

Part II

Regular articles

Nitrogen release from decomposing residues of leguminous cover crops and their effect on maize yield on depleted soils of Bukoba District, Tanzania
F.P. Baijukya, N. de Ridder and K.E. Giller 77–93

Effect of zero tillage and residues conservation on continuous maize cropping in a subtropical environment (Mexico)
P. Monneveux, E. Quillérou, C. Sanchez and J. Lopez-Cesati 95–105

Assessing methods for developing phosphorus desorption isotherms from soils using anion exchange membranes
S. Sato and N.B. Comerford 107–117

A method to estimate practical radial oxygen loss of wetland plant roots
T. Matsui and T. Tsuchiya **119–128**

Water and nutrient dynamics in surface roots and soils are not modified by short-term flooding of phreatophytic plants in a hyperarid desert
F. Zeng, T.M. Bleby, P.A. Landman, M.A. Adams and S.K. Arndt **129–139**

Nitrogen source effect on *Gluconacetobacter diazotrophicus* colonization of sugarcane (*Saccharum* spp.)
A.F.A. Medeiros, J.C. Polidoro and V.M. Reis **141–152**

Interactions between high pH and iron supply on nodulation and iron nutrition of *Lupinus albus* L. genotypes differing in sensitivity to iron deficiency
C. Tang, S.J. Zheng, Y.F. Qiao, G.H. Wang and X.Z. Han **153–162**

Measuring nitrogen and phosphorus uptake by intact roots of mature *Acer saccharum* Marsh., *Pinus resinosa* Ait., and *Picea abies* (L.) Karst
K.J. McFarlane and R.D. Yanai **163–172**

Root morphology and anchorage of six native tree species from a tropical montane forest and an elfin forest in Ecuador
N. Soethe, J. Lehmann and C. Engels **173–185**

Assimilation of phytate-phosphorus by the extracellular phytase activity of tobacco (*Nicotiana tabacum*) is affected by the availability of soluble phytate
S.-C. Lung and B.L. Lim **187–199**

Salinity and temperature effects on germination for three salt-resistant euhalophytes, *Halostachys caspica*, *Kalidium foliatum* and *Halocnemum strobilaceum*
J. Song, G. Feng and F. Zhang **201–207**

Effect of arbuscular mycorrhizae and induced drought stress on antioxidant enzyme and nitrate reductase activities in *Juniperus oxycedrus* L. grown in a composted sewage sludge-amended semi-arid soil
M. Alguacil, F. Caravaca, P. Díaz-Vivancos, J.A. Hernández and A. Roldán **209–218**

Root biomass of individual species, and root size characteristics after five years of CO_2 enrichment on native shortgrass steppe
D.R. LeCain, J.A. Morgan, D.G. Milchunas, A.R. Mosier, J.A. Nelson and D.P. Smith **219–228**

Relationships between climatic variables and sap flow, stem water potential and maximum daily trunk shrinkage in lemon trees
M.F. Ortuño, Y. García-Orellana, W. Conejero, M.C. Ruiz-Sánchez, O. Mounzer, J.J. Alarcón and A. Torrecillas **229–242**

Dynamics of inorganic nitrogen in nitrate and glucose-amended alkaline–saline soil
L. Dendooven, C. Vega-Jarquin, C. Cruz-Mondragon, O. Van Cleemput and R. Marsch **243–252**

Serpentine and nonserpentine *Achillea millefolium* accessions differ in serpentine substrate tolerance and response to organic and inorganic amendments
R.E. O'Dell and V.P. Claassen **253–269**

Relationships between hydrology and soils describe vegetation patterns in seasonally flooded tree islands of the southern Everglades, Florida
T. Troxler Gann and D.L. Childers **271–286**

Effect of Cu toxicity on growth of cowpea (*Vigna unguiculata*)
P.M. Kopittke and N.W. Menzies **287–296**

Arsenate cau ifferential acute toxicity to two P-deprived genotypes of rice seedlings (*Oryza sativa* L.)
C.N. Geng, Y.G. Zhu, Y. Hu, P. Williams and A.A. Meharg **297–306**

Soil carbon, nitrogen and phosphorus dynamics as affected by solarization alone or combined with organic amendment
A. Gelsomino, L. Badalucco, L. Landi and G. Cacco **307–325**

Limitations and potential of *in situ* rhizobox sampling for assessing microbial activity in fruit tree rhizosphere
I. Aviani, Y. Laor and M. Raviv **327–332**

Differences between soil ammonium and nitrate spatial pattern in six plant communities. Simulated effect on plant populations
A. Gallardo, R. Paramá and F. Covelo **333–346**

Architectural tradeoffs between adventitious and basal roots for phosphorus acquisition
T.C. Walk, R. Jaramillo and J.P. Lynch **347–365**

Root system development of oak seedlings analysed using an architectural model. Effects of competition with grass
C. Collet, M. Löf and L. Pagès **367–383**

Instructions for authors **385–388**

Available online
www.springerlink.com

Cover Photo: Logo of the *X Iberian Symposium Plant and Soil* Vol 279.